United States Department of the Interior

BUREAU OF LAND MANAGEMENT
Salem District Office
1717 Fabry Road S.E.
Salem, Oregon 97306

May 4, 2000

IN REPLY REFER TO

5410 (085)
Getaway Early Commercial
Harvest Project
Tract No. 00-302
EA No. OR080-00-02

Dear Reviewer,

The Bureau of Land Management, Marys Peak Resource Area, invites you to review the Getaway Commercial Thinning Environmental Assessment and Finding of No Significant Impact. This document describes the issues and analyzes the probable impacts to resources from the proposed project.

The proposed project is located in Township 14 South, Range 7 West, Sections 25, 35 and 36 W. M. in the South Fork Alsea Watershed. Commercial thinning would occur on approximately 100 acres using ground based yarding systems. Road reconstruction and closure of approximately 3000 feet of existing road are also proposed.

We are interested in hearing from you and ask that you provide us with your comments by June 6, 2000. Comments specific to the alternatives would be the most helpful.

The Environmental Assessment is available for review on the Salem Home Page (www.or.blm.gov/salem/). If you have questions or want to obtain a copy of the environmental assessment, please call Gary Humbard at (503) 315-5981. Please send your written comments to Marys Peak Resource Area, Attn. Gary Humbard, Salem District, Bureau of Land Management, 1717 Fabry Road S.E.,. Salem, Oregon, 97306.

Sincerely,

John Bacho
Field Manager
Marys Peak Resource Area

* Note - Comments, including names and addresses of respondents, will be available for public review at the same time as the EA during regular business hours (7:30 a.m. to 4:00 p.m.), Monday through Friday, except holidays. Individual respondents may request confidentiality. If you wish to withhold your name or street address from public review or from disclosure under the Freedom of Information Act, you must state this prominently at the beginning of your written comment. Such requests will be honored to the extent allowed by law. All submissions from organizations or businesses, and from individuals identifying themselves as representatives or officials of organizations or businesses, will be made available for inspection in their entirety.

* Note - Comments, including names and addresses of respondents, will be available for public review at the same time as the EA during regular business hours (7:30 a.m. to 4:00 p.m.), Monday through Friday, except holidays. Individual respondents may request confidentiality. If you wish to withhold your name or street address from public review or from disclosure under the Freedom of Information Act, you must state this prominently at the beginning or your written comment. Such requests will be honored tot he extent allowed by law. All submissions from organizations or businesses, and from individuals identifying themselves as representatives or officials of organizations of businesses, will be made available for inspection in their entirety.

UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
SALEM DISTRICT OFFICE
MARYS PEAK RESOURCE AREA

ENVIRONMENTAL ASSESSMENT AND FINDING OF NO SIGNIFICANT IMPACT FOR GETAWAY COMMERCIAL THINNING HARVEST PROJECT

EA NUMBER : OR-080-00-18
PREPARED BY: Interdisciplinary Team; Gary Humbard, Team Lead
AREA ENVIRONMENTAL COORDINATOR: Belle Verbics

Summary: This document is an environmental assessment and finding of no significant impact for the proposed Getaway Commercial Thinning Harvest, tract number 00-302. The project area is located in Township 14 South, Range 7 West, Sections 25, 35 and 36 Willamette Meridian, Benton County. The land use allocation is Matrix (General Forest Management Area [GFMA]).

Alternative 1, the proposed action, would involve an commercial thinning harvest of 45 year-old Douglas-fir forest. Approximately one million board feet of trees would be removed from approximately 100 acres. This action would involve timber harvest using ground-based yarding systems and reconstruction and closing of an existing road.

Alternative 2 is the No Action alternative.

The environmental analysis focuses on the following issues identified through scoping and by an interdisciplinary team of BLM resource specialists:

Vegetation: Effects on special status/special attention species and habitats and noxious weeds.
Soils/Fuels: Effects on long-term site productivity. Effects on fuel loading and fire risk.
Water/Riparian: Effects on stream flow, channel conditions and water quality.
Wildlife: Effects on special status, special attention and other wildlife species and their habitats.
Fisheries: Effects on fisheries and their habitats.
Visual: Effects on VRM II designated lands.

For further information, contact Gary Humbard (503-315-5981) or Randy Gould (503-375-5682), 1717 Fabry Rd. S.E., Salem, Oregon, 97306. Comments on this environmental assessment are due June 6, 2000.

FINDING OF NO SIGNIFICANT IMPACT

Introduction

The Bureau of Land Management (BLM) has analyzed the potential effects of a timber harvest project in the upper drainage (T. 14 S., R. 7 W., Secs. 25, 35 and 36 W.M.) of the South Fork Alsea River Watershed, Marys Peak Resource Area, Benton County, Oregon. The action described in this environmental assessment (EA) is proposed to conduct a commercial thinning harvest to meet the annual allowable sale quantity for the Resource Area. The action would meet the needs for forest products and forest habitat as identified in the *Salem District Record of Decision and Resource Management Plan* (the RMP; see pp. 1 and 2). The EA is attached to and incorporated by reference in this Finding of No Significant Impact (FONSI) determination.

This FONSI and the EA are being made available for public review prior to making a decision on the action. The public notice of availability for review will be published in local newspapers of general circulation and through notification of interested individuals, organizations, and state and federal agencies.

Finding Rationale

For the alternatives analyzed, significant impacts on the quality of the human environment would not occur based on the following criteria:

1) The alternatives are in conformance with the following documents which describe the objectives, land use allocations, and management actions/direction for BLM-administered lands in the Marys Peak Resource Area:

- *Salem District Proposed Resource Management Plan/Final Environmental Impact Statement (PRMP/FEIS, September., 1994).*

- *Salem District Record of Decision and Resource Management Plan (RMP, May, 1995).*

- Record of Decision for Amendments to Forest Service and Bureau of Land Management Planning Documents Within the Range of the Northern Spotted Owl (ROD, April 1994) and the Final Supplemental Environmental Impact Statement on Management of Habitat for Late Successional Forest Related Species Within the Range of the Northern Spotted Owl (SEIS, February 1994).

2) The sale area does not qualify for potential wilderness nor has it been nominated as an area of critical environmental concern.

3) The alternatives are consistent with other federal agency and State of Oregon land use plans and with the Benton County land use plan and zoning ordinances. Any permits associated with the implementation of this project would be obtained, and all requirements would be met.

4) No floodplains, wild and scenic rivers, prime or unique farmlands occur within the proposed

harvest areas.

5) Cultural resources, and paleontological resources were not found in the project area.

6) No hazardous materials or solid waste were observed in the project area nor would they be created by the proposed action. Any chemicals or fuel used on the site would be handled using

best management practices.

7) As displayed in the following table, the alternatives would not prohibit or prevent attainment of the Aquatic Conservation Strategy (ACS) Objectives listed in the RMP (pp. 5 and 6).

RELATIONSHIP OF ALTERNATIVES TO RELEVANT MANAGEMENT DIRECTION

Management Direction	Relationship of This Action
Interim Riparian Reserves	Alt. 1 (Proposed Action): Riparian Reserves would remain undisturbed. Alt. 2: Riparian Reserves would remain undisturbed.
Key Watersheds	The proposed project area is not in a Key Watershed.
Watershed Analysis	The first iteration of the *South Fork Alsea Subwatershed Analysis* was completed November 1995.

8) Project design features would assure that potential impacts to water quality from this project would be in compliance with the State of Oregon's In-stream Water Quality Standards and thus the Clean Water Act.

9) In accordance with the *RMP* (see pp. 21-22), the amount of late-successional forest (i.e., 80 years and older) on federal lands was determined for the Upper Alsea Watershed. The 80+ forest age classes occur on approximately 32 percent of the federal lands in the Upper Alsea. This exceeds the *RMP* standard of 15 percent. No late-successional forest stands would be affected by this action.

10) The proposed action and alternatives are in conformance with the *RMP*, which describes the general management objectives, land use allocations, and management actions/direction for BLM-administered lands in the Marys Peak Resource Area

11) The proposed action is within the coastal zone as defined by the Oregon Coastal Management Program. This proposal is consistent with the objectives of the program and the state planning goals which form the foundation for compliance with the requirements of the Coastal Zone Act. Management actions/direction found in the RMP were determined to be consistent with the Oregon Coastal Management Program.

12) The proposed action and alternatives described within the Environmental Assessment for the Getaway Commercial Thinning Harvest project are in conformance with Alternative 9, as modified (*Northwest Forest Plan* and *Salem District Resource Management Plan*). The biological opinion of the United States Fish and Wildlife Service (USFW) is that the adoption of Alternative 9, as amended, is not likely to jeopardize the continued existence of any listed species or result in the destruction or adverse modification of any designated critical habitat for those listed species.

The opinion did not quantify on-the-ground impacts of specific management actions and did not provide an incidental take statement. Individual take is quantified and appropriate take permits are issued through biological opinions for specific actions.

13) The proposed project is in conformance with the Plan Maintenance Documentation: Decision to Delay the Effective Date for Surveying 7 "Survey and Manage" and Protection Buffer Species (March 2000) as directed by Instruction Memorandum No. OR-2000-049 and/or Record of Decision-Supplemental Environmental Impact Statement (SEIS) For Amendment to the Survey and Manage, Protection Buffer, and Other Mitigating Measures Standards and Guidelines, which is expected in June of 2000.

14) Consultation with the U.S. Fish and Wildlife Service (USFWS) concerning listed wildlife species was completed as part of the *Programmatic Biological Assessment in the North Coast Province for Fiscal Year 2000 which would modify the habitats of bald eagles, northern spotted owls, or marbled murrelets*. This resulted in the USFWS issuing a Biological Opinion (BO) dated October 26, 1999. The BO determined that the level anticipated incidental take is not likely to result in jeopardy to the northern spotted owl, the marbled murrelet, or the bald eagle since this proposal is in conformance with the *Northwest Forest Plan* and incorporates all applicable terms and conditions from the BO.

15) Consultation with the National Marine Fisheries Service (NMFS) is in progress. The Biological Assessment, which assessed potential impacts to listed fish in the Oregon Coast Evolutionarily Significant Unit (ESU), would be submitted to NMFS in July 2000. The BO/Letter of Concurrence, responding to that BA, is expected in August 2000. Any decision on the proposed Getaway Commercial Thinning Project would be in compliance with the pending BO/Letter of Cocurrence.

The proposed action is local in nature, and potential adverse impacts would be short-term. Impacts were determined based on observation, and professional training and experience of the interdisciplinary team of BLM natural resource specialists. Determining such environmental effects reduces the uncertainties to a level which does not involve unique risks. The design features identified in the EA would assure that no significant site-specific or cumulative impacts would occur to the human environment other than those already addressed in the EIS.

Finding of No Significant Impact Determination

Based on the analysis of information in the attached EA, my determination is that a new EIS or supplement to the existing EIS are unnecessary and will not be prepared. The proposed action would not result in significant environmental impacts affecting the quality of the human environment greater than those addressed in the existing EIS.

_____ _____

Marys Peak Field Manager Date

Comments regarding this environmental assessment should be received by the Bureau of Land Management, Marys Peak Resource Area, by June 6, 2000.

TABLE OF CONTENTS

ENVIRONMENTAL ASSESSMENT

I. PURPOSE AND NEED

A. Introduction

The Marys Peak Resource Area of the Bureau of Land Management (BLM) is proposing to harvest timber in Township 14 South, Range 7 West, Sections 25, 35 and 36, Willamette Meridian, Benton County, Oregon. The proposed harvest area is located approximately seven air miles southwest of Alpine, Oregon.

The proposed action, described and analyzed herein, is intended to meet the needs for forest products and forest habitat as directed by the *Salem District Record of Decision and Resource Management Plan* (hereafter referred to as the RMP; see pp. 1 and 2). All applicable direction in the *Northwest Forest Plan* is incorporated in the RMP.

This environmental assessment (EA) is tiered to the *Salem District Record of Decision and Resource Management Plan (RMP, May, 1995) and the Salem District Proposed Resource Management Plan/Final Environmental Impact Statement (PRMP/FEIS, Sept., 1994).* The *FEIS* analyzed broad scope issues and impacts within the President's direction to meet the need for forest habitat and forest products (p. 1). The *RMP* provides a comprehensive ecosystem management strategy for BLM managed lands in the Salem District in strict conformance with the Northwest Forest Plan and the *Record of Decision for Amendments to Forest Service and Bureau of Land Management Planning Documents Within the Range of the Northern Spotted Owl* (April 1994).

The *RMP* was signed by the Oregon/Washington State Director of the Bureau of Land Management (BLM) on May 12, 1995. It is based on a comprehensive ecosystem management strategy for federal lands consisting of management objectives, land use allocations, and management actions/direction. This environmental assessment (EA) analyzes the proposed action, which would involve commercial thinning harvest in conifer stands on Matrix lands. The sale of timber from the proposed action would contribute to local economies. Important ecological components within the project area would be retained.

Objectives of the proposed commercial thinning within the matrix are to maximize the growth of residual stands, provide a supply of timber, and maintain some stand structural diversity (down woody material, snags, minor tree species).

Approximately 714 acres were identified in the Matrix (GFMA) as available for commercial thinning. The project contains current stand density and crown condition which would benefit from commercial thinning (on pages 85&86 of the *South Fork Alsea Watershed Analysis*) (October 1995).

This environmental assessment is also tiered to the *Western Oregon Program-Management of Competing Vegetation Final Environmental Impact Statement (VMFEIS, February 1989)* and the *Western Oregon Program-Management of Competing Vegetation Record of Decision (August 1992).* The *VMFEIS* analyzed broad scope issues and impacts for an integrated vegetation management strategy consisting of various treatments. The Record of Decision identifies

treatments and provides processes to meet vegetation management objectives (p. 3) and resource management goals (p. 33). This document is also tiered to the EA and Finding of No Significant Impact (FONSI) for the *Noxious Weed Control Program (May, 1992).* This EA will analyze vegetation management treatments such as release treatments promoting survival and growth of desired vegetation.

This environmental assessment is tiered to the -Plan Maintenance Document alias: *Decision to Delay the Effective Date for Surveying 7 "Survey and Manage" and Protection Buffer Species* (March 2000).

This EA is a site-specific analysis of the proposed action and alternatives prepared under general management guidance provided in the RMP. The RMP is available for review in the Salem District Office. A general description of the project area may be found in this EA under Description of Affected Environment/Environmental Consequences. Additional information about the proposed project is available in the Getaway Project EA file.

B. Scoping

Efforts to involve the public in decisions leading up to this proposed action were as follows:

- The general area was shown as Matrix (GFMA) in the Northwest Forest Plan and the RMP. These documents were widely circulated in the state of Oregon and elsewhere, and public review and comment were requested at each step of the planning process.

- A public notice was mailed to interested parties as shown on the Getaway mailing list on January 31, 2000 requesting initial public input. Two letters were received on February 18, 2000 and the issues were considered in developing the EA.

- A description of the proposal was included in the Salem Bureau of Land Management *Project Update* and mailed in December and March of 1998 and 1999 to more than 900 individuals and organizations on the mailing list.

- A news release announcing availability of the EA for public review and comment was submitted to the *Corvallis Gazette-Times*. Letters with the same information were mailed to interested individuals.

- Copies of the EA are being mailed to individuals, interest groups and agencies.

C. Management Objectives by Land Use Allocation and Resource Program

As directed by the Northwest Forest Plan and the RMP, the primary management objectives for the project area are as follows:

Matrix (GFMA) (RMP pp 20-22)

1. Produce a sustainable supply of timber and other forest commodities to provide jobs and contribute to community stability.
2. Provide connectivity (along with other allocations such as Riparian Reserves) between Late-Successional Reserves.

3. Provide habitat for a variety of organisms associated with both late-successional and younger forests.
4. Provide for important ecological functions such as dispersal of organisms, carryover of some species from one stand to the next, and maintenance of ecologically valuable structural components such as down logs, snags, and large trees.
5. Provide early successional habitat.

Water and Soil Resources (RMP pp 22-24)

1. Comply with State of Oregon water quality requirements to restore and maintain water quality and to protect recognized beneficial uses in watersheds.
2. Improve and/or maintain soil productivity.

Special Status and SEIS Special Attention Species (RMP pp 29-31)

1. Protect, manage and/or conserve habitat for these species so as not elevate their status to any higher level of concern.

Timber Resources (RMP pp 46-48)

1. Manage developing stands to promote tree survival and growth and to achieve a balance between wood volume production, quality of wood, and timber value at harvest.

Visual Resources (RMP pp 36)

1. Minimize visual impacts in areas adjacent to the South Fork Alsea Backcountry Byway.

II. ALTERNATIVES, INCLUDING THE PROPOSED ACTION

A. INTRODUCTION

This section describes alternatives identified by the interdisciplinary (ID) team that helped develop the Getaway Project. Forest management treatments incorporated in the proposed action conform with standard practices and design features intended to reduce the environmental effects of timber harvest and related activities. They comply with the Standards and Guidelines specified in Appendix A of the *Record of Decision for Amendments to Forest Service and Bureau of Land Management Planning Documents Within the Range of the Northern Spotted Owl (ROD, April 1994).* These measures are described in Appendix C, Best Management Practices and Timber Production Capability Classification Fragile Code Guidance in the *Salem District Resource Management Plan (May, 995).* Copies of these documents can be obtained in the Salem District Office or the internet at www.or.blm.gov/salem.

B. SUMMARY OF ALTERNATIVES

Alternative 1 (Proposed Action)

Under the proposed action, commercial thinning harvest using ground-based logging systems would remove a portion of the trees on approximately 100 acres of 45 year-old trees. Some stand structural diversity would be retained. (Refer to Section II. C, Project Design Features for further details.)

Alternative 2 (No Action)

Harvest of the stand would be deferred.

C. ALTERNATIVE 1 (PROPOSED ACTION)

1. Scoping Issues

The following issues concerning the proposed action were identified through public scoping and by an ID team of BLM natural resource specialists representing various fields of science (see Section V, Interdisciplinary Team Members). Issues that were considered but eliminated from further analysis are documented in Appendix B, Environmental Elements Review Summary.

Vegetation: Effects on special status/ SEIS special attention species and habitats and noxious weeds.
Soils/Fuels: Effects on long-term site productivity. Effects on fuel loading and fire risk.

Water/Riparian: Effects on stream flow, channel conditions and water quality.

Wildlife: Effects on special status, SEIS special attention and other wildlife species and their habitats.

Fisheries: Effects on fisheries and their habitats.

Visual: Effects on VRM II designated lands.

D. PROJECT DESIGN FEATURES, MITIGATION MEASURES AND BEST MANAGEMENT PRACTICES

Project design features are operating procedures that would be included in the design and implementation of the proposed action alternative. They also include measures proposed to mitigate potential adverse environmental effects. The design features of this proposal are described below and mapped in Appendix A, Map 1. All acres and other numerical units are approximate.

General

- 100 acres of 45-year-old timber in the Matrix (GFMA) would be thinned.
- Riparian Reserve (a minimum 210-foot for non-fish bearing streams, 420-foot for fish bearing) would be maintained.
- 3000 feet of existing road would be renovated (brushed, bladed and shaped to provide for timber haul).
- The cut trees would be removed by low-impact, ground-based yarding (harvester/ forwarder).
- Impacts related to visual resource management would be minimized.

Matrix (GFMA) Thinning

- Approximately 100 acres of conifer forest on Matrix lands would be commercially thinned by cutting and removing suppressed trees and a limited number of co-dominant trees. The following tables compare the present conditions in the sale area to the proposed action with respect to trees per acre and basal area per acre which would be retained.

Portion of unit	Trees per acre before thinning	Trees per acre after thinning	Basal area per acre before thinning (sq. ft.)	Basal area per acre after thinning (sq. ft.)
Westside	209	75	217	120

Portion of unit	Trees per acre before thinning	Trees per acre after thinning	Basal area per acre before thinning (sq. ft.)	Basal area per acre after thinning (sq. ft.)
Eastside	223	166	204	160

- Where the existing basal area is below 100 sq. ft., a minimum of 80 sq. ft. would be maintained by requiring spacing to be less than 10 feet apart. Commercial thinning would be accomplished by cutting approximately 80 percent of the trees less than the mean diameter of the residual stand, using basal area and spacing for marking guidelines.

- All trees not specifically identified for retention would be cut to release residual trees.

- Dominant and large residual trees would be retained, except where they pose a hazard to on-site workers, where they are located within yarding corridors, or where removal is required for proper spacing of residual trees. Trees without crook, sweep, broken tops, multiple tops, scarring, and disease would be targeted for retention.

- Hardwoods and conifers, other than Douglas-fir, would be reserved throughout the treatment area except where they pose a safety hazard, where they are within rights-of-way or yarding corridors, or to facilitate logging. These trees would be removed from the site if economically feasible. Western hemlock would be retained over Douglas-fir of the same quality for leave trees.

- Approximately 1 acre of a red alder overstory and conifer understory forest (conifer release area) on Matrix lands would be thinned by cutting and removing a portion of the red alder overstory trees. Approximately 40 percent canopy closure would be retained. The conifer understory trees would not be cut.

Matrix Yarding

- Existing skid roads would be used for harvester/forwarder roads as much as possible.

- Logs would be required to be transported free of the ground in the ground-based yarding area. The equipment would be either rubber tired or track mounted and have rear tires or tracks greater than 18 inches in width.

- Yarding corridors would be spaced a minimum 60 feet apart and less than 15 feet in width.

- Unmerchantable material would be placed in yarding corridors to minimize the need for machines to go on bare soil.

- Yarding with ground-based equipment would be restricted to periods of low soil moisture (generally July 15 to October 15). Operations may occur outside of these restricted times if all of the following conditions are met:

  - Machines are kept on areas with heavy slash accumulations in order to distribute the weight over a large area and minimize top soil disturbance. Placement of additional slash on harvester/forwarder trails would probably be necessary in most cases.

  - The area is narrow enough to be harvested with one pass of the loaded forwarder.

  - The operation is frequently monitored (at least every other day) to ensure that significant soil compaction does not occur.

  - Operations are shut down at the first indication of significant soil compaction.

Matrix Road Reconstruction

- Approximately 3000 feet of existing road (14-7-25.1) would be reconstructed by one or more of the following actions: minimizing tree clearing, grading, brushing, adding crushed rock (initial 100 feet), or improving ditchwork.

- Reconstruction would be restricted to periods of low precipitation (generally June through October) in order to limit soil erosion.

Other Actions Required to Protect or Manage Resources

Vegetation

- In accordance with the RMP (pp. 28-33), appropriate measures would be taken to protect special status plant species or additional SEIS special attention plant species discovered prior to selling the timber.

- Except for openings, a minimum of 40 percent canopy closure would be maintained throughout the harvest area.

- All exposed soil areas caused by road reconstruction would be seeded with Oregon certified (blue tagged) red fescue (*Festuca rubra*) at a rate equal to 40 pounds per acre.

  - The *Otidea onoctica* sites would be protected by reserving an approximate 10 acre site outside the unit. Additional sites within the unit would be protected by reserving all trees and restricting ground disturbing activity.

  - *Ramaria aurantiisiccescenes, R. celervirescens, R. stuntzii* and *Gymnopilus puntifolius* sites would be protected by reserving all trees and restricting ground-disturbing activity.

  - The project area would be surveyed for vascular plants, bryophytes and lichens in Spring, 2000.

Soils

- Road 14-7-25.1 and the beginnings of forwarder roads would be blocked with a ditch/berm and or logging debris following harvest.

- Old skid roads and new forwarder roads on slopes over 15 percent, or where obvious channeling of water has or is occurring, would be water barred. The purpose of the water bars would be to reduce surface erosion by returning water onto slopes where it can infiltrate.

- Small landings would be constructed at various points along the existing roads. Any landing construction involving cut and fill as well as initial grading of the roads to make them passable should be restricted to periods of dry weather (generally June1 to October 31). Timber hauling would be restricted to periods of low soil moisture (generally May 1 to October 31) on Road 14-7-25.1.

Wildlife/Fisheries

- Harvest operations and associated activities would be conducted in conformance with the applicable Biological Opinion (# 1-7-99-F-476) concerning listed wildlife species. Pertinent "Terms and Conditions" for this BO include:

  - From April 1 through September 15, restrict daily use of power equipment to the period from two hours after sunrise to two hours before sunset on all project activities that require use of power equipment;
  - Notify the Resource Area Biologist if any federally listed wildlife species are found occupying stands identified for treatment.

- Existing down logs and snags would be retained except where they pose a safety risk, or affect access and ability to operate. Any existing down logs or snags moved or felled would remain on site within the project area.

- Sites for Survey and Manage (S&M) mollusk species would be protected by:

  - protecting all *Prophysaon dubium* (PRDU) and *P. coeruleum* (PRCO) sites with 50- to 100-foot radius "no cut" reserve islands, or exclude sites from project unit.
  - completing Spring 2000 mollusk surveys within the unit, and protecting any additional S&M mollusk species sites found in accordance with approved management requirements (per IM-OR-2000-003 and IM-OR-2000-015);
  - allowing post-harvest prescriptive treatments for coarse woody debris (CWD) creation (felling, girdling) within protected mollusk sites only if 60 percent canopy closure can be maintained within 50 feet of site.

Visual Resources

- Clearing limit debris adjacent to Road 14-7-25.1 would be removed within 100 feet of the South Fork Alsea Access Road. Road width clearing and brushing would be minimized on Road 14-7-25.1. Entrance to road would be closed by re-establishing the ditch and cut slope of road 14-6-34.1 (South Fork Alsea Access Road).

E. Alternative 2: No Action

Commercial thinning, road reconstruction and road closure would not occur.

COMPARISON OF ENVIRONMENTAL CONSEQUENCES, BY ALTERNATIVE, FOR IDENTIFIED ISSUES.

<table>
<tr><th>Issue</th><th colspan="2">Alternative 1</th><th>Alternative 2</th></tr>
<tr><td rowspan="2">Vegetation</td><td>Westside Portion</td><td>Eastside Portion</td><td rowspan="2">Stands needing treatment would be deferred, resulting in a loss of productivity. Future yields of timber would be reduced due to slowing stand growth.</td></tr>
<tr><td>Stand density from 209 trees per acre (TPA) to 75 TPA.</td><td>Stand density from 223 TPA to 166 TPA.</td></tr>
<tr><td>Soils</td><td colspan="2">Residual compaction within RMP standards.</td><td>Continuation of current conditions.</td></tr>
<tr><td>Water/Riparian/Fish</td><td colspan="2">Short-term, variable increase in stream turbidity may occur.

No adverse impacts to riparian vegetation.

No adverse impacts to fish or fish habitat anticipated.</td><td>Continuation of current conditions.

Continuation of current conditions.

No effects to aquatic ecosystem.</td></tr>
<tr><td>Wildlife</td><td colspan="2">Species mix in harvest areas would not change due to this action. No effect on older forest species.</td><td>Continuation of current habitat conditions and trends.</td></tr>
<tr><td>Visual</td><td colspan="2">Potential off-road vehicle use from road reconstruction adjacent to S. F. Alsea Access Road.</td><td>Existing road is overgrown; unauthorized off road use does not currently occur.</td></tr>
</table>

III. DESCRIPTION OF THE AFFECTED ENVIRONMENT/ ENVIRONMENTAL CONSEQUENCES

This section describes the environmental features affected by timber harvest and associated activities, and the environmental consequences which would result from implementing the alternatives. This information is summarized in Appendix B. Resource values are not described in this section if there are no anticipated site-specific impacts, site-specific impacts are considered negligible, or the cumulative impacts described in the existing RMP EIS are considered adequate.

In accordance with statutes, regulations, and executive policies, some resource values and uses must be reviewed in all environmental assessments. A list of these resources and the results of the review for the project area are presented in Appendix B.

A. GENERAL

The proposed project area is located in T. 14 S., R. 7 W., Sections 25, 35 and 36, W.M., in Benton County. The project area is in the South Fork Alsea River Watershed. Land use allocation for the project area is Matrix (General Forest Management Area [GFMA]).

B. TOPOGRAPHY

The project area is situated primarily on a large flat with no distinctive aspect. Elevation varies from 840 to 1,300 feet. Slopes range from 0 to 15 percent, with small areas of up to 35 percent.

C. VEGETATION

Issue: Effects on special status/special attention species and habitats and noxious weeds.

Vegetation: Affected Environment

The stands consist of 45 year-old Douglas-fir, with western hemlock as a minor species and scattered western red cedar and hardwoods. The average relative density for the stands is 60 percent. The canopy closure averages 76 percent in the west portion and 83 percent in the east portion respectively. The understory varies from open to dense thickets of vine maple and/or ocean spray and California hazelnut. The shrub/forb layer is mostly salal on the ridge areas and upper slopes and sword-fern on the lower slopes. There are many logs on the ground in decay classes 3 to 5, and some pockets of recently blown down trees in scattered *Phellinus* patches (root rot).

Other than these scattered disease pockets, the trees within the project area are in good overall health.

The following displays specific stand data:

	Westside Portion	**Eastside Portion**
Timber type	D3- = 1950	D3- = 1950
Trees per acre	209	223
Average diameter breast height (DBH)	14 inches	13 inches
Average basal area	217 square feet	204 square feet
Average thousand board feet (MBF)/acre	42	37
Crown closure	76 percent	83 percent
Site index (King)	138	127
Average coarse woody debris (feet/acre)	1500 > 5 inches DBH	2800 > 5 inches DBH
Relative density	59	60

The three dominant plant associations in the project area are western hemlock/salal, western hemlock/sword-fern and western hemlock/vine maple/sword-fern (see botany report for list of plant species).

The following SEIS special attention fungi species were located in the project area during fall 1999 surveys:

Protection buffer species, *Otidea onotica*
Category 1 and 3 species, *Ramaria aurantiisiccescens, R. celerivirescens, R. stuntzii, Gymnopilus puntifolius* and *Cantharellus formosus*
Category 3 species, *Gomphus clavatus, G. floccosus, Hydnum repandum*
Category 3 and 4 species, *Craterellus tubaeformis* (= *Cantharellus tubaeformis*).

The project area has not been surveyed for noxious weeds although category 3 noxious weeds are known to exist in the vicinity of the project area. Surveys for noxious weeds would commence in May 2000.

Vegetation: Environmental Consequences

Alternative 1 (Proposed Action)

The proposed action would increase the amount of light penetrating the canopy, promoting growth and development of vegetation found at mid-canopy and ground levels. Understory initiation of shade-tolerant conifers associated with canopy layering may be promoted in areas of increased light. Residual trees would increase in DBH, crown depth and limb diameter. The long-term results of density management would be larger average DBH, and larger crowns (higher crown ratios) at any given age, compared to the no treatment option. Residual trees would reach an average 20 inches DBH sooner and therefore meet the desired diameter and height/length characteristics for snags and CWD more quickly. Snags and CWD could then be created from these trees. Additionally, smaller trees with a higher risk of mortality would reach an average 20 inches DBH more quickly, compared to the no treatment option, creating natural opportunities for snag/CWD formation. This action would result in high quality CWD and snags

in a shorter time period compared to Alternative 2. There could be a short-term, elevated risk of Douglas-fir bark beetle infestation where residual trees are damaged by yarding operations. Conversely, there could also be a long-term reduction of insect infestation and disease due to the removal of damaged and suppressed trees.

This action would increase the risk of blowdown as the number of trees per acre is reduced. By reviewing historical data and observing recent windstorm events, the risk for future blowdown would be low.

The proposed action may not affect any special status plant species since none are known in the project area. Project area would be surveyed prior to implementation.

The proposed action could provide future habitat/substrate for SEIS special attention species by providing larger crowns, stems and canopy openings. It could also provide habitat/substrate in the future for other SEIS special attention species by creating older forest characteristics through thinning.

Seven sites scattered throughout the project area totaling approximately 2 acres are reserved for the protection of SEIS special attention species. These sites would provide some stand heterogeneity within the project area.

Noxious weeds generally invade areas of disturbed soil. It is anticipated that a few species of noxious weeds (*Senecio jacobaea* [Tansy ragwort], *Cirsium arvense* [Canadian thistle] and *Hypericum perforatum* [St. John's-wort]) may increase following the completion of the project. These species generally decline in the years (1-5) following completion of a project as they are out competed by native vegetation. However, some populations persist, mainly adjacent to maintained roads. These species are category III noxious weeds and are well established and widespread throughout the Mary's Peak Resource Area and the Salem District. Eradication is not practical using any proposed treatment methods. Grass seeding of exposed soil areas tends to decrease the establishment of noxious weeds. Adverse effects from noxious weeds are not anticipated.

Alternative 2 (No Action)

The canopy would remain "closed," limiting the amount of available sunlight to the understory and ground cover. The ground cover would remain sparse until co-dominant and suppressed trees begin to die, creating additional down woody material and opening the canopy. This would increase the light level in the stand, thus increasing ground cover and shrub growth and creating vertical structure over time. Secondary growth of the conifers would remain low as compared to stands that are more open and/or less stocked. All special attention species would be protected, and noxious weed populations in the area would remain low.

D. SOILS/FUELS

Issue: Effects on long term-site productivity. Effects on fuel loading and fire risk.

Soils: Affected Environment

The soils most prevalent on this site are Blachly clay loam and Klickitat gravelly loam. Slopes on

the majority of the sites vary from flat to 35 percent. Moderate and highly compacted soils have persisted in many of the existing skid trails that date back to the original tractor logging of the sites in the 1940s. There is some brush growing in most of the trails. Large trees are present mostly along the edges of the trails; very few large trees are growing in the trails themselves. The skid trails are generally under 10 feet in width so the timber stands are generally fully occupied by tree canopies.

The Blachly soils on the site are well-drained, gently to moderately sloping soils that developed from alluvial and colluvial materials derived from arkosic sandstone. The surface soils are a dark-brown clay about 9 inches thick with a layer of decomposed and fresh plant litter on the surface. The sub-surface soil is over 80 inches thick and is dark-red and dark reddish-brown clay. Strongly weathered and fractured rock is at a depth of approximately 90 inches.

Klickitat soils are well-drained, gently sloping to extremely steep soils formed in alluvial and colluvial materials derived from basalt. They are found on Coast Range sites at elevations of 500 to 4000 feet. Typically the surface layer is a dark reddish-brown, gravelly clay loam about 8 inches thick. The sub-surface soil is a reddish-brown, very gravelly clay loam about 20 inches thick grading to a sub-soil of dark-brown very gravelly loam about 18 inches thick. Fractured basalt is at a depth of about 45 inches.

Most of the proposed project area is well drained. There are some less well drained, moister sites on the lower terrace areas.

There are two management concerns with these soils:, the potential for compaction and the potential for surface erosion.

Due to the substantial amount of clay and silt-sized particles in these soils, they easily compact when they are moist or wet and subjected to pressure from heavy equipment, dragging logs, etc. Once compacted, there would be a subsequent reduction in the water infiltration rate. On compacted soils, surface run-off on moderate slopes (less than 35 percent) with bare soil would result in a moderate to high hazard for erosion. This erosion hazard can be reduced substantially if some vegetation, litter and debris remain on the soil surface. The proposed project site has slopes between 0 percent and 35 percent, and large amounts of debris and litter would remain on site, so the potential for surface erosion is low. Maintaining some vegetation and litter on the surface of the steeper areas should be a priority not only because it would reduce the potential for erosion, but because it would also reduce the amount of soil compaction.

Fuels: Affected Environment

The project area is presently occupied by fairly continuous stands of second-growth Douglas-fir timber with varying minor components of western hemlock, western red cedar, big-leaf maple and red alder trees. There is a moderate accumulation of dead woody material on the ground. Small snags are scattered through the stand. Large snags (over 20" dia.) are fewer than two per acre. Based on visual estimates, the estimated total dead fuel loading for these stands is in the 10-20 tons per acre range. Fuel model for these sites would be model 8: closed timber litter.

Soils: Environmental Consequences

Alternative 1 (Proposed Action)

Under this proposal, the percentage of total unit area impacted by surface disturbance and soil compaction as a result of additional landing construction would be less than 0.4 percent (approximately 0.4 ac.); that from harvester/forwarder yarding roads 5.0 percent (approximatley 5 ac.). The total percent area affected would be approximately 5.4 percent.

Much of the impacted soil disturbance and compaction described above already exists. Most of the land within the project area had been tractor logged in the 1940s, and there are still many compacted skid roads existing throughout the various sites. These existing roads would be used as much as practical when marking locations for harvest roads for this project. As a result, the actual amount (acreage) of new harvest roads would be substantially less than the totals listed above.

Soil impacted by harvester/forwarder harvest roads usually shows light to moderate compaction in two discontinuous, narrow strips less than 3 feet in width. This is especially true for this type of project, where logs are relatively small and there would be adequate slash on the ground in the corridors to yard over. The design features would cause only light to moderate soil compaction, and very little or no top soil loss would occur. Expected productivity losses, averaged over the entire site, would be 1 to 2 percent for the area. This would include impacts from the additional area used for landings. For most of the landings, equipment would operate on existing haul roads or the harvest roads and the additional ground would simply be used to deck logs until transport. Because roots are penetrating into these old compacted soils, ripping (tilling with winged subsoiler) would not be done at this time to mitigate existing compaction.

Fuels: Environmental Consequences

Alternative 1 (Proposed Action)

The increase in slash created by the proposed thinning would result in a higher risk of fire on the thinned sites following logging. The dead fuel loading is expected to be increased by 5 to 15 tons per acre, with a discontinuous arrangement. Total dead fuel loadings would range from approximately 15 to 35 tons per acre. The fuel model would shift from Model 8 to model 10/11. Overall, the risk of fire following this action would be moderate. This is due to the moderate to flat topography, the continued existence of a tree canopy shading the fuels (cooler temperatures, higher humidities), and because access roads to most of the treated areas would be blocked via gates or berms.

Risk of fire would be greatest during the period when attached needles dry out the first season following cutting. These “red needles” generally fall off within one year, and fire risk greatly diminishes. Fire risk would continue to diminish as the area "greens up" with understory vegetation, and the fine twigs and branches in the slash begin to break down. In order to mitigate fire risk, these sites should be monitored for the need of closing or restricting access during periods of high fire danger. During the closed fire season the first year following harvest activities, while fuels are in the “red needle” stage, the entire area should be posted closed to all off-road motor vehicle use.

Alternative 2 (No Action)

No action would result in the continuation of current conditions at this site (i.e., timber stand and

brush would continue growing). Surface erosion would continue to occur on Road 14-7-25.1.

E. WATER/RIPARIAN

Issue: Effects on stream flow, channel conditions, and water quality.

Water/Riparian: Affected Environment

The primary stream draining the project area is the South Fork of the Alsea River. The project area is contained in the upper South Fork Alsea watershed, which is approximately 9,500 acres or 14.8 sq. miles in drainage area. Several South Fork Alsea tributaries, including Coleman, Williams and Fall creeks, drain the area.

The upper South Fork Alsea main channel (from Alsea Falls to the confluence with Williams Creek) is primarily a Rosgen F stream type (less than 1 percent gradient, with high entrenchment and width/depth ratios and low sinuosity (Rosgen,1996)). It is incised in alluvium and appears to have poor bank stability and moderate to high levels of bank erosion in portions, particularly below the confluence with Williams Creek.

The main tributary channels in the area (Coleman Creek and Fall Creek) are typically Rosgen B4 channel types (moderately incised, 2 to 4 percent gradient, cobble-bedded channels). These channel types are fairly resistant and functional. However, they transition to highly incised channels with high width-to-depth ratios and moderately high levels of bank erosion as they near their confluence with the main South Fork Alsea channel.

Minimal water quality data were located for streams in the project area, so water quality conditions are primarily based on observation and inference.

Much of the upper South Fork Alsea watershed was harvested in the 1950s and early 1960s. Road construction, tractor logging, dragging of large trees across the landscape, and clear cutting likely resulted in compaction of surfaces, reduced evapotranspiration and an increase in the frequency and quantity of stream discharge, with increases in stream velocity. Clearing of log and debris jams may have occurred in the main channel thus reducing channel resistance. Although no historic references concerning the trapping of beaver (*Castor canadensis*) and removal of beaver dams (further reducing channel resistance elements) were located for this watershed, it was a common practice throughout the century and is likely to have influenced channel conditions here. Much of the disturbance noted coincided with two of the largest flood events of the last century, which occurred in 1955 and 1964. The results have been an increased rate of channel incision into its alluvial bed followed by lateral scour, channel widening and increased bank erosion. This was followed by four decades of reduced inputs of large woody debris, increases in sediment supply, and ditch construction in some areas, to further increase drainage efficiency in the watershed.

Suspended Sediment and Turbidity

Very little quantitative data concerning suspended sediment transport and/or turbidity are currently available for this watershed. The data that have been collected imply that fine sediment levels in stream substrates and those transported as suspended sediment during winter storm events are within the range of natural variability for this watershed. It should be noted that the

upper South Fork Alsea watershed has large stretches of low gradient, alluvial channel with active beaver populations. These conditions are conducive to the capture, storage and transport during storm events of high concentrations of fine sediment.

Occasional turbidity grab samples have been collected in the upper watershed since 1995 during winter storm events. Although readings of 45 nephelometric turbidity units (NTUs) on the mainstem and 100 NTUs on Coleman Creek were collected during the 1996 flood, these high levels of turbidity are short-lived. The upper South Fork Alsea turbidity values ranged from a minimum of 1 NTU to a maximum of 100 NTU, with an average median value of 4 NTU and standard deviation of 13 NTU. These levels are well below the maximum NTU levels found on one study of Mill Creek in the Alsea River basin (Beschta 1979).

In spite of these indications that fine sediments are not a problem in this watershed, sampling to date has been infrequent. Currently there are not enough sediment data in the watershed to provide a reliable representation of water quality conditions. In addition, other observations of channel and hillslope conditions suggest that fine sediment supply and transport in the watershed may be high.

Over the last century, disturbance of hillslopes and the main channel, including its flood plain, has increased sediment supply and transport in the watershed. Large sized sediment (i.e., cobble and gravel) is mostly stored in-channel along tributaries such as Coleman creek while it has been almost completely removed from the main channel.

Deep, high velocity stream flows which are confined to the channel are common during the winter in the mainstem channel. These winter storm events, which transport large amounts of large sized bedload and substrates, place tremendous pressure on the main channel's banks, resulting in scour and bank collapse. Bank erosion is likely a main contributor to the supplies of fine sediments and turbidity in the watershed, particularly from the confluence of Williams Creek downstream.

In addition, contributions of fine sediment both from slump prone areas low in the valley and material still washing down from headwater areas disturbed in the 1950's and 1960's have added to the supply of fine sediment in this watershed. Chronic contributions of fine sediments from road surfaces may also be occurring but have not been quantified or documented. Without further investigation, it is not possible to say if chronic runoff of road surface fines into local streams is a significant limitation for the aquatic system in this watershed. Although it was the main source for sediment supply in the 1950's and 1960's, sediment supplied by landsliding and mass wasting is currently a relatively small contributor in this watershed (*South Fork Alsea Watershed Analysis*).

In response to these concerns, monitoring of the upper South Fork Alsea channel and water quality conditions is ongoing.

Stream Temperature

Continuous stream temperature measurements and macroinvertebrate samples were collected at two sites on the upper South Fork Alsea main channel as well as on lower Coleman and Fall creeks in the summer of 1999. Both Coleman and Fall creeks maintained summer stream temperatures well below the state standard, with seven-day averages of 15.0 C° and 13.6 C°,

respectively.

Current streamside vegetation on tributary channels in this area is adequate to shade surface waters during summer base flow (hence tributary channel summer stream temperatures are well within the range of natural variability in this watershed). Implementation of the Northwest Forest Plan would maintain these temperatures on public lands in the watershed.

Oregon Department of Environmental Quality's (DEQ) *1998 303d List of Water Quality Limited Streams* is a compilation of streams which do not meet the state's water quality standards. Neither the South Fork Alsea nor its tributaries are listed in the report. However, the Alsea River is listed as not meeting water quality standards for summer stream temperatures from the mouth to headwaters.

The DEQ has also published an assessment, the "319 Report," which identifies streams with potential non-point water pollution problems (*1988 Oregon Statewide Assessment of Nonpoint Sources of Water Pollution*). The upper South Fork Alsea and its tributaries were identified as either having no problem or lacking data (the report does not discriminate between no problem and no data).

Beneficial uses of surface water from the project area are displayed in the table which follows. There are no known municipal or domestic water users in the project area. Irrigation and livestock watering occur in the Alsea Valley, near the town of Alsea, approximately 8.5 miles downstream from the project area. Additional beneficial uses of the streamflow in the project area include resident fish, recreation, and esthetic values.

BENEFICIAL USES ASSOCIATED WITH STREAMS IN THE PROJECT AREA

Stream (Watershed)	Project Action	Beneficial Use	Distance from Project Action	Information Source
South Fork Alsea	Timber harvest, commercial thin. Road reconstruction.	Anadromous fish	1 mile (below falls)	BLM
		Resident fish	Immediate	BLM
		Domestic use	> 10 miles	WRIS*
		Irrigation/live-stock watering	5 miles	WRIS*

* WRIS = *Water Rights Information System* of the Oregon Department of Water Resources

Water/Riparian: Environmental Consequences

Alternative 1 (Proposed Action)

Measurable effects to stream flow, channel morphology, and water quality as a result of this proposed action are unlikely. This action is unlikely to alter the current condition of the aquatic system either by affecting its physical integrity, water quality, sediment regime or in-stream flows.

This proposal is unlikely to substantially alter stream flow or peak flow events. Tree removal and road reconstruction would not occur on steep, unstable slopes where the potential for mass wasting adjacent to stream reaches is high. Therefore, increases in sediment delivery to streams due to mass wasting are unlikely to result from this action. In addition, potential impacts resulting from tree harvest and road reconstruction would be mitigated, and with the implementation of "best management practices" (BMPs), are unlikely to contribute measurable amounts of sediment to streams. The riparian canopy would be retained, thereby maintaining riparian microclimate conditions and protecting streams from increases in temperature.

In conclusion, this proposal is unlikely to impede and/or prevent attainment of the stream flow and basin hydrology, channel function, or water quality objectives of the Aquatic Conservation Strategy (ACS). (See Appendix C: ACS objectives)

Streamflow

Alterations in the capture, infiltration and routing (both surface and subsurface) of precipitation as a consequence of the mechanical removal of trees and reductions in stand density have been documented on watersheds in the Pacific Northwest and other parts of the world. However, the actions reviewed under this proposal would affect less than 1 percent of the forest cover in the upper South Fork Alsea watershed. Detectable direct or indirect effects to streamflow as a result of this action are unlikely.

Water Quality

Two natural erosion processes, mass wasting and surface erosion, are the primary sources for sediment delivery to streams. Mass wasting in this watershed is generally limited to hillslopes with gradients steeper than 60 percent (*South Fork Alsea Watershed Analysis*). Management on steep slopes may accelerate mass wasting processes. Surface erosion processes in the Oregon Coast Range are nearly non-existent on forested land due to the high infiltration capacity of native soils, heavy vegetative growth and deep layers of surface organic material ("duff"). However, practices that compact the soil surface, remove the duff layer or concentrate runoff may lead to surface erosion with the potential for delivery to streams and a degradation of water quality. In both cases, management practices with the potential to accelerate erosion fall into three categories: road construction, timber harvest, and site preparation (particularly prescribed burning). Best management practices (BMPs) and mitigation measures are proposed to eliminate and/or limit acceleration of sediment delivery to streams in the project area.

Additional water quality parameters (e.g., nutrients, dissolved oxygen, pesticide and herbicide residues, etc. [U.S. EPA 1991]) are unlikely to be affected by this proposal and were not reviewed for this analysis .

Riparian Reserves

No activity would occur within the 420-foot fish-bearing and 210-foot non-fishbearing Riparian Reserves.

Road Reconstruction and Hauling

This proposal includes approximately 3,000 feet of reconstruction of an existing road which is

outside of the Riparian Reserves and does not cross any streams. Road reconstruction impacts to water quality would be limited by restricting work to periods of low rainfall and runoff. Reconstruction would employ techniques to reduce concentration of runoff and sedimentation to a minimum.

The main haul routes would be on rocked forest roads to the South Fork Alsea Access Road, which is paved. Timber hauling during periods when water is flowing on roads and into ditches could potentially increase stream turbidity if flows from ditches are large enough to enter streams. Mitigation measures to deal with this potential problem are cited under design features.

Tree Harvest and Yarding

Yarding corridors, if sufficiently compacted, may route surface water and sediment into streams. However, several factors limit the potential for this to occur: 1) even if compacted, high levels of residual slash on yarding corridors would contribute to reducing the accumulation of runoff by deflecting and redistributing overland flow laterally to areas where it would infiltrate into the soil; 2) gentle gradients in this project area provide little opportunity for surface water to flow; 3) no-treatment zones in riparian areas have high surface roughness, which functions to trap any overland flow and sediment before reaching streams; and 4) the small size of trees being yarded would limit surface disturbance to minimal levels.

Tree removal is not proposed on steep, unstable slopes where the potential for mass wasting adjacent to stream reaches is high. Therefore, increases in sediment delivery to streams due to mass wasting are unlikely to result from this action.

Site Preparation

No post-treatment site preparation, including underburning or soil surface "scarification," is proposed.

Stream Temperature

Shading along all the tributaries in the project area is currently adequate, and this proposal would not alter streamside shading here. Forest density and hence shading immediately adjacent to the mainstem South Fork Alsea River would be left unaltered under this proposal. Overall, this proposal is unlikely to have any measurable effect on stream temperatures in this watershed.

Channel Stability and Function

Some channels in the project area are currently functioning at the low end of the range expected under "reference conditions;" other channels are functioning normally. In the short-term, this proposal is unlikely to alter the current condition of channels in the project area. Minimization of disturbances from the proposed project (e.g., increased flows or sediment delivery) is likely to result in the maintenance of stream channels in their current condition.

Cumulative Effects

A "Level 1" analysis of the risk for cumulative effects to hydrologic processes, channel conditions and water quality for the upper South Fork Alsea watershed was conducted utilizing

the *Salem District Watershed Cumulative Effects Analysis Procedure, FY1994*. The following conditions were observed:

- The upper South Fork Alsea covers approximately 12,000 acres of which 3,500 (30 percent) are private land while the remaining 8,500 (70 percent) are managed by the BLM. 460 acres (2 percent) of the upper South Fork Alsea watershed is "open" (consisting primarily of recent clear-cuts less than 10 years in age) while closed stands of conifer and deciduous species cover 11,540 acres (98 percent) of the watershed.

- Most of the private forest stands in the watershed are old enough to be thinned or clear-cut harvested (greater than 40 years in age) within the next 10 years. Approximately 400 acres of public land is available for regeneration harvest within the next 10 years; 3,500 acres are available for commercial thinning or stand density management (in LSRs and Riparian Reserves).

- The transient snow zone (TSZ) comprises approximately 40 percent (4,800 acres) of the watershed.

- There are approximately 104 miles of road, for a road density of 5.5 miles/mi^2. 120 stream crossings potentially result in a stream extension of 12 miles (10 percent increase in channel lengths) during large storm flow events.

The Level 1 analysis indicates that, when past activities together with likely near term management activities are considered, a moderate risk level exists for cumulative effects to water quality, channel conditions and hydrologic conditions in the upper South Fork Alsea. As a result, a more intensive analysis was conducted to define risk levels further.

Level 1 and level 2 analyses for increases in peak flow and risks to aquatic resources were conducted using the Washington State DNR watershed analysis methods (Washington Forest Practice Board 1997). Details of the analysis are contained in a supplemental report (*Cumulative Effects Analysis for the Upper South Fork Alsea Watershed*)(see project file).

In summary, the analysis found a low sensitivity to increases in peak flows and low potential risks for aquatic resources for normal storm events. It found an "indeterminate" risk for "unusual" peak flow events associated with a two-year return interval. This led to a level 2 analysis to provide greater precision. The level 2 analysis (Bed Mobility Analysis) indicated a "low" risk for effects to channel substrate as a result of the worst scenario estimated in the level 1 analysis. Therefore, it was concluded that potential cumulative effects leading to bed scour are low when considering this proposal in conjunction with other likely actions in the watershed.

The risk of this proposal for contributing to cumulative effects to hydrologic processes or water quality in these watersheds is low. To the extent that this proposal would influence overall watershed condition, it could result potentially in some short-term, local increases in stream turbidity during road construction and repair (e.g., would only occur during and immediately after construction and are not likely to be visible or measurable downstream from the project area). Since large woody debris (LWD) and pool habitat are "at risk" in these streams (see the *South Fork Alsea Watershed Analysis*) (Appendix 15), long-term LWD supply to streams is likely the most critical factor for maintenance of aquatic habitat in this watershed. With the retention of Northwest Forest Plan stream buffers, this proposal is expected to maintain LWD

recruitment and aquatic habitat in this watershed over the short- and long-terms.

Alternative 2 (No Action)

No action would result in the continuation of current conditions at this site, which includes continued erosion of road 14-7-25.1.

F. WILDLIFE/FISHERIES

Issue: Effects on special status, special attention and other wildlife species and their habitats. Effects on fisheries and their habitats.

Wildlife: Affected Environment

A summary of forest habitat conditions presented in the *South Fork Alsea River Watershed Analysis* (USDI-BLM 1995; covers south half of Upper Alsea Watershed) shows that 17,360 acres (43 percent) of the South Fork Alsea Watershed is composed of early to mid-seral habitats. About 8,300 acres of this habitat lies on BLM land (37 percent of 22,500 acres). The forest stands on BLM lands within one mile of the proposed treatment area (2,770 acres) are composed primarily of early to mid-seral conifer and mixed conifer/hardwoods (85 percent, 2,350 acres), with a few recent clear-cuts (1.5 percent, 40 acres), a few mature patches (1.5 percent, 40 acres), and scattered patches of old-growth (12 percent, 340 acres).

The *South Fork Alsea River Watershed Analysis* found that the structural components of forest stands that were of most concern within this watershed were large hard snags, coarse woody debris (CWD), development of sub-canopy layers, and tree species diversity. The project area is composed primarily of moderate to high density Douglas-fir, with some adjacent pockets of hardwoods. Structural components of late-seral forests (large trees, multiple canopy layers, large hard snags, heavy accumulations of CWD, and species diversity) are generally lacking in the young stands surrounding and including the project area. The legacy of previous harvests in these areas has resulted in moderate to high accumulations of large down logs in advanced stages of decay (about 2,900 ft^3/acre), with very few large snags (dbh greater than 20 inches). A 10-acre patch of mature forest lies along the northeastern edge of the proposed unit with two mature remnants within the proposed unit boundary. A few root rot pockets which have recently begun to show up, along with windthrow and stem exclusion processes, have recently contributed modest amounts of small diameter snags and down logs. The proposed project area does not contain any significant special habitat features.

A great variety of wildlife species may use mid-seral conifer dominant forest habitats. Most of these species can utilize a broader range of habitat conditions than those species associated with old-growth or early-seral habitats. The *South Fork Alsea River Watershed Analysis* found that the primary concern for wildlife species within this watershed was the greatly reduced and fragmented condition of the remaining old-growth habitat (only 2,124 acres [5.3 percent of the water-shed]). In contrast, the early and mid-seral habitats are quite abundant, making up about 43 percent of the current forest habitat in the watershed. Since the proposed project area lies outside of Riparian Reserves, no riparian zone habitats would be affected by this action.

A review of all pertinent Special Status Wildlife Species possibly affected by the proposed action

is presented in the Biological Evaluation (see Project File). Many of these species are found in different habitat types or are widespread generalists that are unlikely to be affected by this action. The current status and condition of several of these species were described within the watershed analysis. Only the following species groups are discussed with respect to the affected environment and environmental consequences related to this proposed action:

- Federally listed wildlife species (species covered by Endangered Species Act)
- Survey and Manage wildlife species (mollusks, red-tree voles)
- pertinent bird species (forest raptors, neotropical birds, woodpeckers)
- pertinent mammals (bats, white-footed vole, big game animals)

The only federally listed wildlife species that are likely to occur in the project area are the northern spotted owl and marbled murrelet. In the early 1990s both of these species were listed as Threatened under the Endangered Species Act, due primarily to the loss of late-seral habitat occurring regionally within their range.

No spotted owl or marbled murrelet surveys were required for this project evaluation. However, information gathered from surveys associated with a demographic study of spotted owls indicates that this species has not been detected within 1.5 miles of the proposed unit. The nearest active spotted owl site lies in a late-seral habitat patch 2.4 miles northeast of the unit. The mid-seral stands of the project area are likely to provide dispersal habitat that may be used by spotted owls as they move across the landscape between older, more suitable forest stands. About 78 percent of the BLM lands within this watershed currently provide at least dispersal habitat.

The nearest occupied marbled murrelet site is 4.5 miles northwest of the project area. There is no suitable nesting habitat for spotted owls or murrelets within the proposed unit. Two remnant mature/old growth trees do exist along the northeast edge of the unit, but these trees stand well above the surrounding forest canopy and are not considered suitable habitat for either species. The federal lands in and adjacent to the project area have been allocated as Matrix (GFMA), and have been designated as Critical Habitat for the northern spotted owl (not for the marbled murrelet).

The Survey and Manage (S&M) wildlife species likely to occur within the project area include eight mollusk species (snails and slugs) and the red-tree vole. Over one hundred-forty acres within the project area have been surveyed once for S&M mollusk species (per IM OR-98-097: *Survey and Manage Survey Protocols - Mollusks*). An additional survey would be completed by June 2000. To date, two tail-dropper slug species (*Prophysaon dubium* and *P. coeruleum*) have been found at two sites. The sites where these mollusks were found are representative of majority of the proposed treatment area and included the following characteristics:

- simple forest structure indicative of mid-seral managed stands (high stem density, few large standing snags);
- a legacy of large down logs in an advanced state of decay;
- moderate to high canopy closure (greater than 60 percent);
- variable shrub understory (vine maple, ocean spray, pin cherry); and
- variable ground cover (duff, moss, sword-fern, salal, Oregon grape).

The mollusks found on recent surveys most likely represent populations that survived the past disturbance (old-growth clear-cut in 1950s) by utilizing the refugia provided by the accumu-

lations of large down logs within clear-cut areas of less ground disturbance. Alternatively, these mollusk species may not be as closely associated with late-successional forest characteristics as is currently believed, and therefore, they may also be more widespread and more adaptable to habitat disturbances than is currently believed.

Red-tree voles are likely to occupy the adjacent older forest patches and are unlikely to use the mid-seral stands within the treatment area due to the young age (45 years-old) and small tree size (average dbh less than 14 inches) within the stand. These stand conditions do not require surveys for this species (per IM-OR-2000-037: *Survey and Manage Protocol - Oregon Red Tree Vole, Version 2.0*, dated February 18, 2000). However, a non-protocol survey of the proposed unit was completed in August 1999, and a protocol survey of the northeast portion of the unit including the adjacent mature forest patch was completed in March 2000. No suspected tree vole nests were found within the unit, although a few stick nests of other species were noted. One suspected tree vole nest was found within the adjacent mature forest patch, about 250 feet from the proposed unit boundary.

Pertinent bird species likely to occur within the project area include forest raptors, neotropical migratory birds, and several woodpecker species. No surveys are required for these species. The forest raptors such as the goshawk, Cooper's hawk, and sharp-shinned hawk are known to utilize forest stands similar in age and structure to the project area. These species may nest in these stands and forage for birds and small mammals within the forest or adjacent open habitats. Changes in forest structure by harvesting or through natural succession can cause these species to abandon historic nest sites. No known nest sites for these species are known within or adjacent to the proposed unit nor were any nests found during project planning visits to the area. Goshawks have nested in similarly aged stands within ten miles of this unit. Cooper's and sharp-shinned hawks have been observed during the breeding season within a few miles of this project area.

Several species of neotropical migratory songbirds are known to occur and likely nest within the proposed unit. Some of these species are believed to be declining regionally due to loss of habitat on their breeding grounds and wintering grounds (Central and South America). Most of these species are insectivorous and make use of a variety of forest habitats. Hardwood stands may be especially important to some species for nest sites and foraging habitat. Several woodpecker species have been observed within and adjacent to the project area. These species, which excavate cavities in snags and down logs, may be limited by the distribution and quality of coarse woody material across the landscape.

Pertinent mammals of concern include some bat species, the white-footed vole, and big game species such as deer, elk, cougar, and bear. Most of the bat species utilize prominent structural habitats for roosting (buildings, bridges, caves, cliffs, old-growth trees) and then forage over wide a wide variety of habitats. Only a few bat species are likely to roost among the foliage or bark of mid-seral forest stands. The white-footed vole is a very rare and relatively unknown small rodent that has been documented within similar forest stands along streams in this watershed. Heavy brush, large CWD, and a prominent hardwood component appear to be important components of its habitat. Deer and elk use of the project area has been observed during project planning visits to the area. Deer use of the project area appears to be moderate, while very little elk use was noted. Cougars may be resident or transient through the project area, as they hunt for deer and elk. Black bears are also likely residents within the project vicinity. They often utilize the large clusters of down logs as den sites and, upon emerging in the spring, may cause some

damage to younger Douglas-fir trees as they tear into the bark to feed on the cambium layer. No bear-damaged trees were noted during project planning visits, although some existing large CWD may provide adequate denning habitat for this species.

Fisheries: Affected Environment

The project area contains two major tributaries to the South Fork Alsea: Coleman Creek and Fall Creek. Each of these major streams provide habitat for cutthroat trout (*Oncorhychus clarkii*) and have tributaries that run near the units proposed for harvest. Most streams have moderate gradients of approximately 1 - 4 percent and run through the South Fork Alsea Valley before entering the South Fork Alsea. These lower gradient valley streams contain typical small stream pool/riffle habitat with a dominant substrate of gravel.

Almost all the tributary streams that run near the proposed harvest units provide habitat for resident cutthroat trout. Fish presence surveys were completed for Streams 8, 10 and Fall Creek in April 2000. All fish presence in stream 8 and Fall Creek were > 420 feet from the project boundary. Fish are not present in Stream 10.

Alsea Falls (a natural barrier to anadromous fish) is approximately 0.25 mile downstream from the project area.

Coastal coho salmon are listed as threatened under the Endangered Species Act. Consulatation with the NMFS on this proposed project would be conducted in accordance with current BLM policy.

Wildlife: Environmental Consequences

Alternative 1 (Proposed Action)

Direct and Indirect Impacts. The proposed thinning harvest and CWD creation occurring on about 100 acres would change the existing forest structure and alter the development of future forest stand conditions. The direct and indirect changes anticipated to occur to forest habitat characteristics from this proposed action are:

[short-term (less than 10 years)]

- light to moderate reduction of canopy closure (resulting canopy greater than 40 percent) over the entire treatment area, which represents less than 1 percent of the mid-seral forests within the water-shed or about 4.7 percent of these stands on BLM lands within one mile of the project area;
- minor reduction and disturbance to existing CWD material (snags and down logs) resulting from felling, yarding and road re-construction;
- creation of new hard CWD of optimal size and quality for available stand conditions; and
- retention and enhancement of hardwood tree and shrub diversity on all but one acre.

[long-term (greater than 10 years)]

- transition in structural characteristics of the treated stand to more closely resemble

late-seral forest habitat (larger diameter trees, sub-canopy development, greater tree species diversity, greater volume and size of hard CWD);
- ! extended persistence of hardwood tree and shrub cover diversity; and
- ! eventual regeneration harvest of some portion of the treated stand is likely (subject to future analyses).

No effects are anticipated to occur to riparian zone habitats or existing remnant older trees and snags within or adjacent to the project area. All other activities that are likely to occur in association with this proposed thinning harvest (e.g., road work, yarding, hauling, future firewood contracts) are not expected to alter the structure or suitability of habitats within or adjacent to the proposed unit, unless otherwise described below.

Suitable habitat for the federally listed wildlife species (spotted owls and marbled murrelets) and the constituent elements of Critical Habitat for these species would not be affected by this action. The treated stand would still function as dispersal habitat for spotted owls since the average canopy closure would remain above 40 percent. However, the noise created by power equipment used during the project could disturb spotted owls and marbled murrelets that may be occupying the adjacent minor patches of unsurveyed suitable habitat (late-seral and old-growth). For this reason, the proposed action is considered a "may affect, likely adverse affect" to spotted owls and marbled murrelets. To address this concern, consultation was completed for this action under the *Programmatic Biological Assessment in the North Coast Province for Fiscal Year 2000 Projects Which Would Modify the Habitats of Bald Eagles, Northern Spotted Owls, or Marbled Murrelets* (September 9, 1999). A final Biological Opinion (# 1-7-99-F-476) on this consultation was received October 26, 1999. All applicable terms and conditions from this BO have been incorporated into the design features of this proposed action.

Specific management guidelines for Survey and Manage mollusk species found within and adjacent to the proposed action area follow the currently approved Management Recommendations for each species (see IM-OR-2000-003 and IM-OR-2000-015). All known sites would be protected, and no species would be considered locally common. Current design features provide the following management regime by species:

- ! *Prophysaon dubium* (PRDU): one site enclosed within a reserve island (habitat area includes a S&M fungus site) inside of the unit boundary;
- ! *Prophysaon coeruleum* (PRCO): one site outside of proposed unit; and
- ! Other S&M mollusk species (none found): additional surveys conducted spring of 2000 may result in additional habitat areas (reserve islands) designated within the proposed unit.

Design features incorporated into this proposed action are anticipated to protect and maintain the viability of S&M mollusk species within the project area for the following reasons:

- ! all mollusk sites found would be protected from ground disturbance and canopy alteration by reserve islands or by exclusion from the unit boundary;
- ! the prominent habitat features found at these mollusk sites (e.g., large CWD, hardwood tree and shrub understory, moderate to high canopy closure) would not be significantly affected, thereby maintaining existing microsite characteristics;
- ! the hardwood tree and shrub components within the treatment areas would be retained and enhanced relative to non-treatment areas;

- fresh input of hard CWD and enhancement of stand structure should benefit key component of mollusk habitat for the foreseeable future (5-20 years); and
- more suitable mollusk habitat (e.g., late-seral forests, old-growth patches, and riparian corridors, maple hardwoods) adjacent to the project area, which is likely to contain more of these species, would not be affected by this action.

The proposed unit is not considered suitable habitat for red-tree voles, and no red-tree vole nests were found within the unit. Project activities within the unit boundary would have no significant impact on the quality of habitat in the adjacent older forest patch where voles may be present.

None of the remaining wildlife species discussed in the affected environment are likely to be substantially affected by this proposed action so as to contribute to their decline or elevate their status for concern for the following reasons:

- only a small percentage (less than 1 percent) of the early to mid-seral habitat within the watershed would be affected by this treatment, and locally (within one mile), only 4 percent of this habitat type would be affected by this action;
- existing habitat in the proposed unit would not be lost, but rather it would be retained and continue to provide habitat for the majority of species currently present;
- existing corridors for movement through Riparian Reserves would not be affected;
- species of concern that may occur within the project area either do not make significant use of this habitat type or their use of this habitat is dependent on structural components (canopy closure, hardwoods, snags and down logs, existing stick nests) that would not be substantially diminished within the local landscape;
- and lastly, the resulting CWD creation is likely to improve quality of this habitat component for some species in the immediate future.

Cumulative Impacts

Within the South Fork Alsea watershed, BLM has commercially thinned less than 200 acres of mid-seral forest stands within the past 10 years (about 1 percent of BLM ownership in watershed). Due to ecological succession and forest management (mostly private land harvests), the amount of habitat in each seral stage within this watershed is not stagnant, but constantly in transition from early open habitats toward mature forest stands. Ecological succession would move about 29 percent of this mid-seral habitat toward late-seral forest conditions over the next 20 years. Clear-cut harvests on private lands could remove as much as 45 percent of this mid-seral habitat type in the next 20 years. In the near future, BLM would evaluate the commercially thinning of about 350 acres of early to mid-seral forests within this watershed. While thinning harvests do alter forest structure, such treatments do not result in a loss of habitat for most of the species of concern that are known or suspected to use these forests. The cumulative impact on habitat availability for species of concern as a result of foreseeable thinning treatments (less than 20 years) is considered minor.

Alternative 2 - No Action.

This alternative would result in no change to the affected environment. Short-term impacts to species as described in Alternative A would be avoided. However, immediate gains in forest structure would not be achieved.

Fisheries: Environmental Consequences

The proposed action would have no adverse impacts to resident and anadromous fish and fish habitat. Habitat and channel conditions are expected to be maintained. Full stream buffers (210 ft. for non-fish bearing streams and 420 ft. on fish bearing streams) would maintain stream channels and current habitat conditions.

The harvest forwarder would ride on slash for minimal compaction. Slash left behind would distribute rainfall and keep overland flow to a minimal level. The small amount and size of timber being hauled out, in conjunction with stream buffers and seasonal restrictions, would keep sediment out of adjacent streams.

Alternative 2 - No Action.

This alternative would result in no change to the affected environment.

G. VISUAL RESOURCES

Issue: Effects on visual resources.

Visual: Affected Environment

The project area contains land designated as Visual Resource Management (VRM) Class II which is adjacent to the South Fork Backcountry Byway. Visual Resource Management Class II objectives are to retain the existing characters of landscapes. Management activities may be seen but should not attract the attention of the casual observer (pp. 36, RMP) The proposed project boundary is located a minimum 500 feet from the Byway.

Visual: Environmental Consequences

The proposed action would re-construct Road 14-7-25.1, which could provide unauthorized off-road vehicle use. The immediate closure of the road with a berm and ditch after the completion of operations should prevent unauthorized off-road use from occurring. Monitoring of unauthorized off-road use would occur by BLM personnel from the nearby Alsea Falls Recreation sites. The densely forested stand between the project boundary and the Backcountry Byway would prevent the thinning operation from being seen from either the recreation sites or the Backcountry Byway road and meet VRM class II objectives.

Alternative 2 - No Action.

Road 14-7-25.1 would remain as a overgrown road. Unauthorized off-road use would not occur. Erosion of the road surface would continue to occur.

IV. MONITORING

Monitoring would be accomplished through timber sale contract administration and in accordance with monitoring guidelines in Appendix J of the RMP. Effectiveness monitoring is in process at a slightly older sale (Super Hammer Thinning) which has a similar prescription to this sale. Monitoring of the Getaway Commercial Thinning project could be used to determine the effectiveness of the treatment and to help make recommendations for the timing of future thinning harvests.

V. CONSULTATION

The proposed action would be submitted for consultation to the National Marine Fisheries Service (NMFS) in July 2000. All actions that are implemented in the Marys Peak Resource Area would comply with the Biological Opinion/Letter of Concurrence.

The proposed project was submitted for consultation to the U.S. Fish and Wildlife Service (FWS) in September 1999. A final Biological Opinion (# 1-7-99-F-476) on this consultation was received October 26, 1999. The proposed action is considered a “may affect, likely adverse affect” to spotted owls and marbled murrelets.

VI. INTERDISCIPLINARY TEAM MEMBERS

NAME	TITLE	DATE/INITIAL
Gary Humbard	Lead Forester/Logging System Specialist	
Scott Hopkins	Wildlife Biologist	
Tom Tomczyk	Soil Scientist/Fuels Specialist	
Ron Exeter	Botanist	
Mark Yeiter	Cruiser/Appraiser	
Tom Vanderhoof	Cultural Specialist	
Bill Caldwell	Silviculturist	
Steve Liebhardt	Fisheries Biologist	
Patrick Hawe	Hydrologist	
Tom Jones	Civil Engineer Technician	
Belle Verbics	NEPA Coordinator	
Randy Gould	Natural Resource Staff Administrator (management review)	

APPENDIX A: PROJECT MAPS

Map 1: Sale Plan
Map 2: Sale Area Location

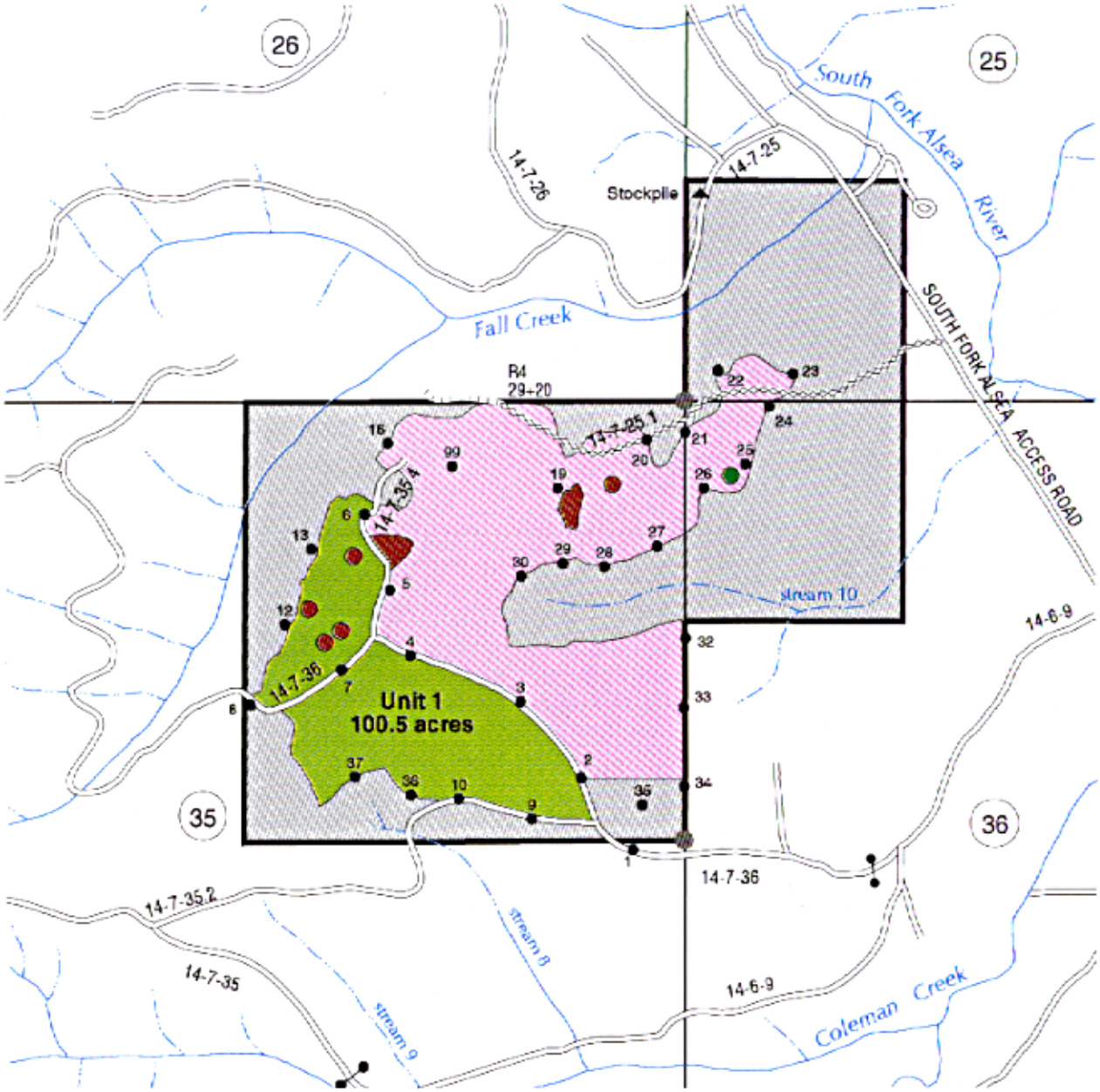
April 21, 2000

Map 1

United States Department of the Interior
BUREAU OF LAND MANAGEMENT

GETAWAY ENVIRONMENTAL ASSESSMENT PROJECT MAP

T. 14 S., R. 7 W. Sections 25, 35, 36 W. M. - SALEM DISTRICT - OREGON



LEGEND

- Partial Cut Area - Eastside
- Partial Cut Area - Westside
- Conifer Release
- Fungi Protection Area
- Reserve Area and Contract Area Boundary
- Existing Roads
- Impassable Roads
- Road to be Renovated
- Non-fishbearing Streams
- Fishbearing Streams
- Existing Gate
- Found Corner
- Station

Scale: 1" = 1,000'

* Note: Unit acres do NOT include 40' road width or fungi protection areas. Unit 1 has 100.32 acres of partial cut and 0.18 acres of conifer release.

United States Department of the Interior

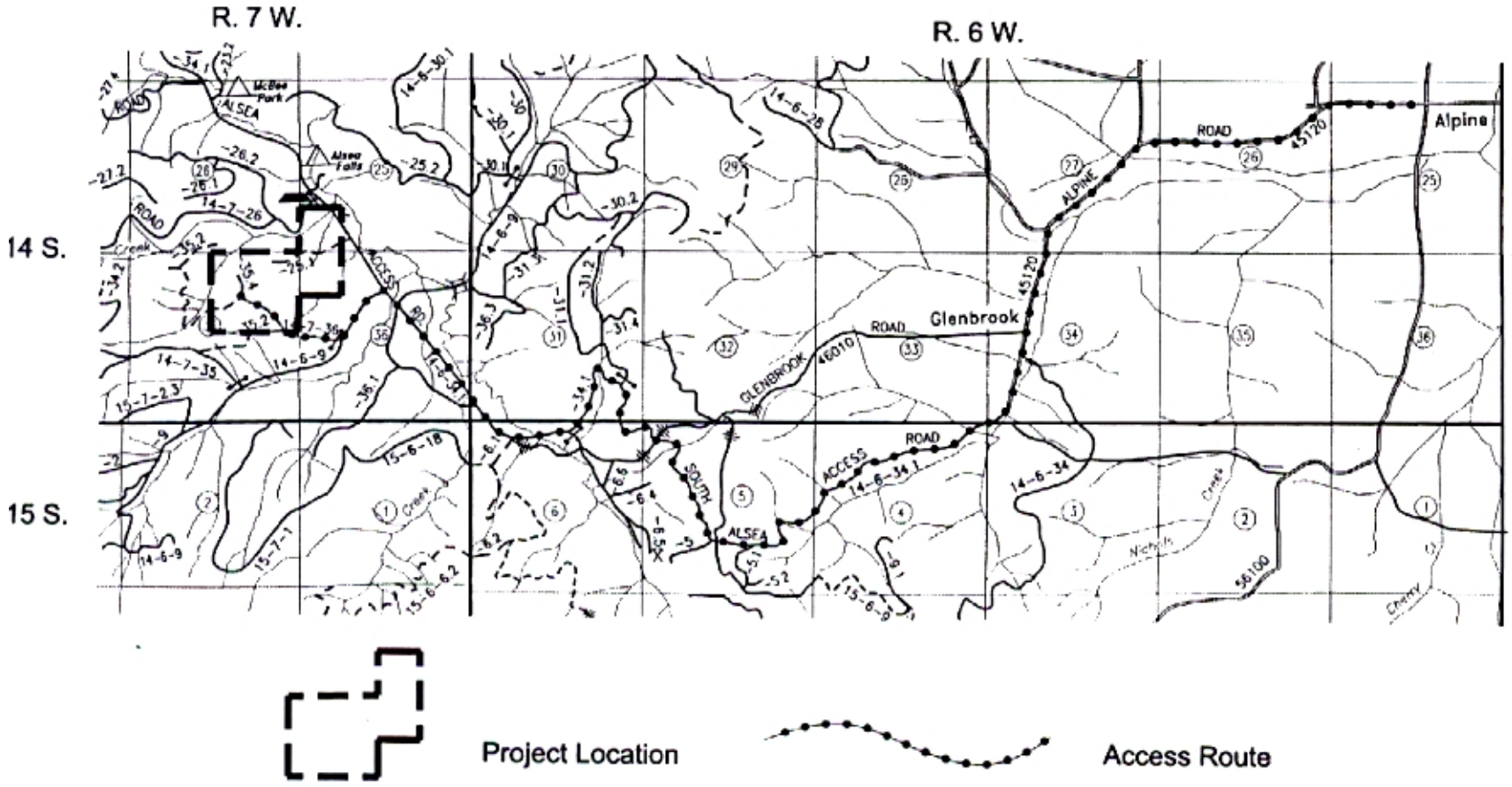
BUREAU OF LAND MANAGEMENT

Map 2

T. 14 S., R. 7 W., Sections 25, 35, and 36, W.M. - SALEM DISTRICT - OREGON

Getaway Environmental Assessment
Project Location Map

Scale: 1" = 1 mile



Project Location

Access Route

APPENDIX B: ENVIRONMENTAL ELEMENTS REVIEW SUMMARY

The following table summarizes environmental features which the Bureau of Land Management is required by law or policy to consider in all Environmental Documentation (BLM Handbook H-1790-1, Appendix 5: Critical Elements of the Human Environment).

ENVIRONMENTAL FEATURES

Environmental Feature	Affected/Not Affected/May Be Affected	Remarks
Air Quality	Not Affected	
Areas of Critical Environmental Concern	Not Affected	
Cultural, Historic, Paleontological	Not Affected	
Prime or Unique Farm Lands	Not Affected	
Flood Plains	Not Affected	
Native American Religious Concerns	Not Affected	
Threatened, Endangered, or Special Status Plant Species or Habitat	May Be Affected	All appropriate mitigation has been incorporated into design features. See Vegetation, Special Status/Attention Species, Chapter III
Threatened, Endangered, or Special Status Animal Species or Habitat	Wildlife: May Be Affected Fish: May Be Affected	All appropriate mitigation has been incorporated into design features. See Vegetation, Special Status/Attention Species, Chapter III. Consultation is completed. Would be submitted for consultation to the National Marine Fisheries Service (NMFS) in July 2000. Would comply with the Biological Opinion/Letter of Concurrence.

Hazardous or Solid Wastes	Not Affected	
Drinking or Ground Water Quality	Not Affected	
Wetlands or Riparian Reserves	Not Affected	
Invasive, Nonnative Species	Not Affected	
Environmental Justice	Not Affected	
Wild and Scenic Rivers	Not Affected	
Wilderness	Not Affected	

COMMON ISSUES REVIEW

Resources	Affected/May Be Affected/Not Affected	Remarks
Special Attention Animal Species and Habitat	May Be Affected	All sites found have been protected.
Special Attention Plant Species and Habitat	May Be Affected	All sites found have been protected.
Minerals	Not Affected	
Land Uses	Not Affected	
Soils & Sedimentation	Affected	See Soils section.
Water: **DEQ 303(d) Listed Streams** **Water Temperature** **Water Quantity**	 Not affected Not affected Not affected	
Rural Interface Areas	Not affected	

Appendix C to EA# OR080-00-02 GETAWAY

Aquatic Conservation Strategy Objectives Review Summary

(Note - See RMP pg 5-6 for more detailed explanations of the ACS objectives)

ACS Objective	How Project Meets the ACS Objective
1. Maintain and restore distribution, diversity, and complexity of watershed and landscape features to ensure protection of aquatic systems.	There are approximately 7673 acres of conifer stands between ages 25 and 60 in the South Fork Alsea watershed, which constitutes approximately 19% of the watershed vegetation (South Fork Alsea Watershed Analysis, p. 33). Most stands are dense single canopy layer Douglas-fir stands which have not been thinned. Habitat structures such as species diversity, sub-canopy layers, down wood and snags are considered low in the watershed as a whole (South Fork Alsea Watershed Analysis, p.10). The proposed project would restore some of those features over approximately 100 acres in the proposed project area (EA, p.10). At the project level, a 420 foot Riparian Reserve along Fall Creek, and a 210 foot Riparian Reserve along the 2nd order stream on the south side of the proposed project area would be maintained (EA p. 17). No cutting or yarding would occur within these areas. Hardwoods and conifers other than Douglas-fir would generally be reserved (EA p. 5). Existing down logs and snags would be retained except where they pose a safety risk (EA p. 7). These project design features would contribute to maintaining the distribution, diversity and complexity of landscape and watershed features.
2. Maintain and restore spatial connectivity within and between watersheds.	Spatial and temporal connectivity of terrestrial watershed features would be maintained by keeping the Riparian Reserves intact. Because there would be no logging or associated disturbance in the Riparian Reserves, no stream shading would be lost nor would any short term physical barriers be created in the aquatic system. In the long term, connectivity along streams and between streams and uplands would be enhanced by restoring habitat features such as species diversity and sub-canopy layers. The project is consistent with this objective because both terrestrial and aquatic connectivity would be maintained.

Appendix C to EA# OR080-00-02 GETAWAY

3. Maintain and restore physical integrity of the aquatic system, including shorelines, banks, and bottom configurations.	The physical integrity of the aquatic system would be maintained by maintaining Riparian Reserves, which would protect stream banks and existing configurations, provide shade, maintain stream morphology, maintain water temperature, and provide a continuing source for coarse woody debris. In the short term, this proposal is unlikely to alter the current condition of channels in the project area. Minimization of disturbance from the proposed project (e.g., increased flows or sediment delivery) is likely to result in the maintenance of stream channels in their current condition (EA, p. 18). A cumulative effects analysis was done and it was concluded that cumulative effects leading to bed scour are low (EA, p.19). Yarding and road renovation would be restricted to periods of low precipitation (EA, p.5) and no roads would be located within Riparian Reserves. The project is consistent with this objective because the physical integrity of the stream channels would be maintained by retaining full Riparian Reserves and locating road renovation ouside of Riparian Reserves.
4. Maintain and restore water quality necessary to support healthy riparian, aquatic, and wetland ecosystems.	Sedimentation would be minimized by restricting road renovation and ground base yarding to periods of low rainfall and soil moistture (EA,p.5). Residual slash on the compacted areas would contribute to reducing the accumulation of runoff by deflecting and redistributing overland flow laterally to areas where it may infiltrate the soil (EA p.18). Increases in stream temperature would be unlikely as implementation of the Riparian Reserves would maintain adequate shading. Forest density and hence shading immediately adjacent to the main stem South Fork Alsea river would be left unaltered (EA, p.18). The project is consistent with this objective because retention of full Riparian Reserves and project design features would maintain water quality.

Appendix C to EA# OR080-00-02 GETAWAY

5. Maintain and restore the sediment regime under which system evolved.	Tree removal would not occur on steep unstable lopes where the potential for mass wasting adjacent to stream reaches is high. Therefore increases in sediment delivery to streams due to mass wasting are unlikely to result from this action (EA, p.18). Sedimentation from compacted yarding corridors would be minimized by maintaining high levels of slash in the yarding corridors which would deflect and redistribute overland flow laterally to areas where it would infiltrate. Gentle gradients in the proposed project area would provide little opportunity for surface water to flow. Overland flow and sediment would be trapped by surface roughness in Riparian Reserves. The small size of trees being yarded would also limit surface disturbance (EA, p.18). The proposed project is consistent with this objective as project design features and retention of Riparian Reserves would maintain the physical integrity of the hillslopes and channels; no alteration of the current sediment regime is expected.
6. Maintain and restore instream flows.	Instream flows would be maintained. Alterations in the capture, infiltration and routing (both surface and subsurface) of precipitation as a consequence of the mechanical removal of trees and reductions in stand density have been documented on watersheds in the Pacific Northwest and other parts of the world. However, the actions reviewed under this proposal would affect less than 1% of the forest cover in the upper Sough Fork Alsea watershed. Detectable direct or indirect effects to streamflow as a result of this action are unlikely. (EA p.17). This proposed project is consistent with this objective because maintains instream flows.
7. Maintain and restore the timing, variability and duration of floodplain inundation and water table elevation in meadows and wetlands.	Floodplain inundation and water table elevation can be altered by altering stream flow or sediment regimes or any disturbance which causes stream entrenchment or down cutting. The proposed project is not likely to alter the current condition of the aquatic system either by affecting its physical integrity, water quality, sediment regime or instream flows (EA,p.17). The proposed project is consistent with this objective because neither instream flows nor sediment regime would be altered, and the project would not affect the timing, variability or duration of floodplain inundation or wetland water table.

Appendix C to EA# OR080-00-02 GETAWAY

8. Maintain and restore the species composition and structural diversity of plant communities in riparian zones and wetlands to provide thermal regulation, nutrient filtering, and appropriate rates of bank erosion, channel migration and CWD accumulations.	The functions provided by bank and stream side vegetation would remain unaffected by the proposed treatment, as it would remain intact within the Riparian Reserves. Species composition and structural diversity would be maintained in riparian areas by the avoidance of road construction and harvesting in the Riparian Reserves. The project is consistent with this objective because retention of Riparian Reserves where no activity occurs would maintain current species composition and structural diversity.
9. Maintain and restore habitat to support well distributed populations of native plant, invertebrate, and vertebrate riparian-dependent species	No habitat would be disturbed within the Riparian Reserves. The proposed project is consistent with this objective because avoiding activities in the Riparian Reserves would maintain existing habitat.